

<b>Notice of Allowability</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/051,595	TIAN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Sheela C Chawan	2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 1/17/02.
2. ☒ The allowed claim(s) is/are 1-38.
3. ☒ The drawings filed on 17 January 2002 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |  |
|---|--|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)            |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____. |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date <u>1/17/02</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                    |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                              | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance   |
|   | 9. <input type="checkbox"/> Other _____.   |

***Examiner's Amendment***

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mrs. Anne Dougherty on Dec 9, 2004.

The application has been amended as follows:

Claim 38, page 44, line 1, and insert the attachments paragraph as follows.

**DETAILED ACTION**

***Drawings***

2. The Examiner has approved drawings filed on 12/7/01.

***Reason For Allowance***

3. The following is an examiner's statement of reasons for allowance:

Claims 1-38 are allowed.

For claim 1, the prior art on record, fails to teach or fairly suggest, singly or in combination, a system for automatically detecting neutral, expressionless face images in the digital images, among other things comprising: a face classification unit that classifies the representation into one of a neutral class and a non-neutral class. The closest prior art, Turk et al., (US.5,164,992) discloses face recognition system. Kang (US.6,009,210) discloses hand-free interface to a virtual reality environment using head tracking. Blanz et al., (US. 6, 556,196B1) discloses method and apparatus for the

Art Unit: 2625

processing of images. Kado et al., (US.5,410,609) discloses apparatus for identification of individuals. Liu et al., (US.6,807,290 B2) discloses rapid computer modeling of faces for animation. Lemelson et al., (Us.6,400,835B1) discloses taillight mounted vehicle security system employing facial recognition using a reflected image. Each of the above references either singularly or in combination, fail to anticipate or render the above limitation obvious.

Claim 36 is representative of claim 1.

Claim 37 is representative of claim 1.

Claim 38 is representative of claim 1.

Claims 1- 38 are allowed.

4. Any comments considered necessary by applicant must be submitted on later than the payment of the issue fee and to avoid processing delays should preferably accompany the issue fee. Such submissions should be clearly labeled, comments on statement of reasons for allowance.

***Contact Information***

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sheela C Chawan whose telephone number is 703-305- 4876. The examiner can normally be reached on Monday - Thursday 8 - 6.30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta can be reached on 703-308-5246. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*SCC*

Sheela Chawan  
Patent Examiner  
Group Art Unit 2625  
Dec 7, 2004

Proposed amendment language for Claim 38.

Claim 38. (amended) ~~A computer program product having a computer program~~ A program storage device, readable by machine, tangibly embodying a program of instructions executable by the machine to cause the machine to perform a method for automatically detecting neutral, expressionless face images in digital images, the ~~computer program~~ method comprising the steps of:

acquiring an image;

detecting one or more face subimages of one or more faces in the image;

estimating one or more characteristic facial features as characteristic points in each detected face subimage, one of the characteristic points being a first and a second mouth corner on a mouth of the face;

detecting one or more contours of one or more facial components;

determining a mouth shape of the mouth from the contour of the mouth;

creating a representation of the mouth shape, the mouth being one of the facial components; and

classifying the representation into one of a neutral class and a non-neutral class.



BHAVESH M. MEHTA  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2600